

AMENDMENTS TO THE CLAIMS

1 to 37 (Canceled).

38 (Previously Submitted). A method for repairing a diseased or damaged section of an aorta comprising

(i) providing a system comprising
at least one tissue-piercing fastener having a sharpened distal tip for piercing and penetrating tissue,

a fastener attachment assembly sized and configured to be deployed from a remote access site to a targeted endovascular region, the fastener attachment assembly including
an intraluminal directing device defining an access path and including
a deflectable distal region, and

an intraluminal fastener applier separate from the intraluminal directing device and being sized and configured for advancement into the intraluminal directing device along the access path and retrieval from the intraluminal directing device along the access path, the intraluminal fastener applier including an actuated member that is selectively operable to generate an implantation force in an implantation force direction to implant the tissue-piercing fastener by causing the sharpened distal tip to pierce and penetrate the tissue in the targeted endovascular region, and

means associated with the fastener attachment assembly for applying a resolving force in a direction different than the implantation force direction within the targeted endovascular region to resolve at least a portion of the implantation force,

(ii) first, introducing the intraluminal directing device separately from intraluminal fastener applier from a remote access site to a location within a prosthesis that has been deployed at a target site in an aorta where the diseased or damaged section exists;

(iii) establishing the access path to a desired fastening site on the prosthesis by manipulating the intraluminal directing device within the prosthesis to orient the distal region with respect to the desired fastening site;

(iv) and then advancing the intraluminal fastener applier from the remote access site into the intraluminal directing device along the access path to the desired fastening site;

(v) anchoring the prosthesis by operating the actuated member to generate an implantation force to implant the tissue-piercing fastener into tissue at the desired fastening site while the means applies a resolving force to resolve within the targeted site within an aorta at least a portion of the implantation force,

(vi) and then separating the intraluminal fastener applier from the intraluminal directing device by retrieving the intraluminal fastener applier from the intraluminal directing device along the access path back to the remote access site.

39 (Canceled).

40 (Previously Presented). A method according to claim 38 wherein (iii) includes rotating the intraluminal directing device and/or deflecting the distal region.

41 (Previously Presented). A method according to claim 38 wherein the prosthesis includes at least one self-expanding scaffold, and wherein (ii) comprises releasing the prosthesis from constraint to permit the at least one scaffold of the prosthesis to self-expand at the target site.

42 (Previously Presented). A method according to claim 38 wherein the prosthesis includes at least one malleable scaffold, and wherein (ii) comprises applying a radially expansive force within the prosthesis to cause expansion of the at least one scaffold.

43 (Previously Presented). A method according to claim 38 wherein the intraluminal directing device includes a passage that defines the access path,

wherein (iv) includes advancing the intraluminal fastener applier from the remote access site into the intraluminal directing device through the passage to the desired fastening site, and

wherein (vi) includes separating the intraluminal fastener applier from the intraluminal directing device by retrieving the intraluminal fastener applier from the intraluminal directing device through the passage back to the remote access site.

44 (Previously Presented). A method according to claim 43 wherein the passage comprises an interior lumen.

45 to 48 (Canceled).

49 (Previously Presented). A method according to claim 38

further including, after (vi), (vii) loading at the remote access site another tissue-piercing fastener having a sharpened distal tip for piercing and penetrating tissue on the actuated member.

50 (Previously Presented). A method according to claim 49

further including repeating (iv), then (v), then (vi), and then (vii) until a desired number of tissue-piercing fasteners are implanted.

51 (New). A method for repairing a diseased or damaged section of an aorta comprising

(i) providing a system comprising

at least one tissue-piercing fastener having a sharpened distal tip for piercing and penetrating tissue,

a fastener attachment assembly sized and configured to be deployed from a remote access site to a targeted endovascular region, the fastener attachment assembly including

an intraluminal directing device defining an access path and including a deflectable distal region, and

an intraluminal fastener applier separate from the intraluminal directing device and being sized and configured for advancement into the intraluminal directing device along the access path and retrieval from the intraluminal directing device along the access path, the intraluminal fastener applier including an actuated member that is selectively operable to generate an implantation force in an implantation force direction to implant the tissue-piercing fastener by causing the sharpened distal tip to pierce and penetrate the tissue in the targeted endovascular region, and

means associated with the fastener attachment assembly for applying a resolving force in a direction different than the implantation force direction within the targeted endovascular region to resolve at least a portion of the implantation force,

(ii) first, introducing the intraluminal directing device separately from intraluminal fastener applier from a remote access site to a location within a prosthesis that has been

deployed at a target site in an aorta where the diseased or damaged section exists, thereby establishing an access path;

(iii) and then advancing the intraluminal fastener applier from the remote access site into the intraluminal directing device along the access path;

(iv) anchoring the prosthesis by manipulating the intraluminal directing device within the prosthesis to orient the distal region with respect to the desired fastening site and by operating the actuated member to generate an implantation force to implant the tissue-piercing fastener into tissue at the desired fastening site while the means applies a resolving force to resolve within the targeted site within an aorta at least a portion of the implantation force,

(v) and then separating the intraluminal fastener applier from the intraluminal directing device by retrieving the intraluminal fastener applier from the intraluminal directing device along the access path back to the remote access site.

40 (Previously Presented).

52 (New). A method according to claim 51 wherein (iv) includes rotating the intraluminal directing device and/or deflecting the distal region.

53 (New). A method according to claim 51 wherein the prosthesis includes at least one self-expanding scaffold, and wherein (ii) comprises releasing the prosthesis from constraint to permit the at least one scaffold of the prosthesis to self-expand at the target site.

54 (New). A method according to claim 51 wherein the prosthesis includes at least one malleable scaffold, and wherein (ii) comprises applying a radially expansive force within the prosthesis to cause expansion of the at least one scaffold.

55 (New). A method according to claim 51 wherein the intraluminal directing device includes a passage that defines the access path,

wherein (iii) includes advancing the intraluminal fastener applier from the remote access site into the intraluminal directing device through the passage to the desired fastening site, and

wherein (v) includes separating the intraluminal fastener applier from the intraluminal directing device by retrieving the intraluminal fastener applier from the intraluminal directing device through the passage back to the remote access site.

56 (New). A method according to claim 55
wherein the passage comprises an interior lumen.

57 (New). A method according to claim 51
further including, after (v), (vi) loading at the remote access site another tissue-piercing fastener having a sharpened distal tip for piercing and penetrating tissue on the actuated member.

58 (New). A method according to claim 57
further including repeating (iii), then (iv), then (v), and then (vi) until a desired number of tissue-piercing fasteners are implanted.